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(54) Title: MASS SPECTROMETER ASSEMBLIES MASS SPECTROMETRY VACUUM CHAMBER LID ASSEMBLIES AND MASS SPECTROMETER OPERATIONAL METHODS

(57) Abstract: One embodiment of a mass spectrometer assembly includes a base configured to define at least a portion of a vacuum chamber volume; a mass separator component within the vacuum chamber volume; a lid coupled to the mass separator component and configured to be removably operably coupled with respect to the base; and wherein the lid is configured to be positioned in a first operable position to form a hermetical seal with the base and provide the mass separator component within the vacuum chamber volume and a second operable position wherein at least a portion of the lid is spaced from the base and the mass separator component is at least partially removed from within the vacuum chamber volume. Mass spectrometer operational methods are provided that can include at least partially removing the lid from the base, wherein the removing of the lid also at least partially removes the mass separator component from the vacuum chamber volume; and inspecting the mass separator component with the mass separator component removed from the vacuum chamber volume.

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